FACILITY NAME AND PERMIT NUMBER:

Baxter, TN WWTP TN0021121

*Form Approved 1/14/99*
*OMB Number 2040-0086*

FORM 2A NPDES

# NPDES FORM 2A APPLICATION OVERVIEW

## APPLICATION OVERVIEW

**Form 2A has been developed in a modular format and consists of a "Basic Application Information" packet and a "Supplemental Application Information" packet. The Basic Application Information packet is divided into two parts. All applicants must complete Parts A and C. Applicants with a design flow greater than or equal to 0.1 mgd must also complete Part B. Some applicants must also complete the Supplemental Application Information packet. The following items explain which parts of Form 2A you must complete.**

## BASIC APPLICATION INFORMATION:

A. **Basic Application Information for all Applicants.** All applicants must complete questions A.1 through A.8. A treatment works that discharges effluent to surface waters of the United States must also answer questions A.9 through A.12.

B. **Additional Application Information for Applicants with a Design Flow ≥ 0.1 mgd.** All treatment works that have design flows greater than or equal to 0.1 million gallons per day must complete questions B.1 through B.6.

C. **Certification.** All applicants must complete Part C (Certification).

## SUPPLEMENTAL APPLICATION INFORMATION:

D. **Expanded Effluent Testing Data.** A treatment works that discharges effluent to surface waters of the United States and meets one or more of the following criteria must complete Part D (Expanded Effluent Testing Data):

1. Has a design flow rate greater than or equal to 1mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to provide the information.

E. **Toxicity Testing Data.** A treatment works that meets one or more of the following criteria must complete Part E (Toxicity Testing Data):

1. Has a design flow rate greater than or equal to 1 mgd,
2. Is required to have a pretreatment program (or has one in place), or
3. Is otherwise required by the permitting authority to submit results of toxicity testing.

F. **Industrial User Discharges and RCRA/CERCLA Wastes.** A treatment works that accepts process wastewater from any significant industrial users (SIUs) or receives RCRA or CERCLA wastes must complete Part F (Industrial User Discharges and RCRA/CERCLA Wastes). SIUs are defined as:

1. All industrial users subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations (CFR) 403.6 and 40 CFR Chapter I, Subchapter N (see instructions); and
2. Any other industrial user that:
   a. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions); or
   b. Contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the treatment plant; or
   c. Is designated as an SIU by the control authority.

G. **Combined Sewer Systems.** A treatment works that has a combined sewer system must complete Part G (Combined Sewer Systems).

**ALL APPLICANTS MUST COMPLETE PART C (CERTIFICATION)**

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# BASIC APPLICATION INFORMATION

## PART A. BASIC APPLICATION INFORMATION FOR ALL APPLICANTS:

**All treatment works must complete questions A.1 through A.8 of this Basic Application Information Packet.**

**A.1. Facility Information.**

Facility Name: Baxter, TN Wastewater Treatment Plant

Mailing Address: P.O. Box 283
Baxter, TN 38544

Contact Person: Tommy Buford

Title: Chief WWTP Operator

Telephone Number: (931) 858-3348

Facility Address (not P.O. Box): 810 Elmore Town Road
Baxter, TN 38544

**A.2. Applicant Information.** If the applicant is different from the above, provide the following:

Applicant Name: _____

Mailing Address: _____

Contact Person: _____

Title: _____

Telephone Number: (  )

**Is the applicant the owner or operator (or both) of the treatment works?**

☒ owner ☐ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☒ facility ☐ applicant

**A.3. Existing Environmental Permits.** Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

| | | | |
|---|---|---|---|
| NPDES | TN0021121 | PSD | |
| UIC | | Other | |
| RCRA | | Other | |

**A.4. Collection System Information.** Provide information on municipalities and areas served by the facility. Provide the name and population of each entity and, if known, provide information on the type of collection system (combined vs. separate) and its ownership (municipal, private, etc.).

| Name | Population Served | Type of Collection System | Ownership |
|---|---|---|---|
| Baxter, TN | 1,391 | seperate | municipal |
| | | | |
| | | | |

**Total population served** 1,391

**A.5. Indian Country.**

a. Is the treatment works located in Indian Country?

☐ Yes ☒ No

b. Does the treatment works discharge to a receiving water that is either in Indian Country or that is upstream from (and eventually flows through) Indian Country?

☐ Yes ☒ No

**A.6. Flow.** Indicate the design flow rate of the treatment plant (i.e., the wastewater flow rate that the plant was built to handle). Also provide the average daily flow rate and maximum daily flow rate for each of the last three years. Each year's data must be based on a 12-month time period with the 12th month of "this year" occurring no more than three months prior to this application submittal.

a. Design flow rate .500 mgd

| | | Two Years Ago | Last Year | This Year |
|---|---|---|---|---|
| b. | Annual average daily flow rate | .226 | .233 | .186 |
| c. | Maximum daily flow rate | 1.30 | 1.08 | 1.14 |

**A.7. Collection System.** Indicate the type(s) of collection system(s) used by the treatment plant. Check all that apply. Also estimate the percent contribution (by miles) of each.

☒ Separate sanitary sewer 100 %

☐ Combined storm and sanitary sewer ____ %

**A.8. Discharges and Other Disposal Methods.**

a. Does the treatment works discharge effluent to waters of the U.S.? ☒ Yes ☐ No

If yes, list how many of each of the following types of discharge points the treatment works uses:

i. Discharges of treated effluent 1

ii. Discharges of untreated or partially treated effluent ____

iii. Combined sewer overflow points ____

iv. Constructed emergency overflows (prior to the headworks) ____

v. Other ____ ____

b. Does the treatment works discharge effluent to basins, ponds, or other surface impoundments that do not have outlets for discharge to waters of the U.S.? ☐ Yes ☒ No

If yes, provide the following for each surface impoundment:

Location: ____

Annual average daily volume discharge to surface impoundment(s) ____ mgd

Is discharge ☐ continuous or ☐ intermittent?

c. Does the treatment works land-apply treated wastewater? ☐ Yes ☒ No

If yes, provide the following for each land application site:

Location: ____

Number of acres: ____

Annual average daily volume applied to site: ____ mgd

Is land application ☐ continuous or ☐ intermittent?

d. Does the treatment works discharge or transport treated or untreated wastewater to another treatment works? ☐ Yes ☒ No

If yes, describe the mean(s) by which the wastewater from the treatment works is discharged or transported to the other treatment works (e.g., tank truck, pipe).

If transport is by a party other than the applicant, provide:

Transporter Name

Mailing Address

Contact Person

Title

Telephone Number ( )

For each treatment works that receives this discharge, provide the following:

Name

Mailing Address

Contact Person

Title

Telephone Number ( )

If known, provide the NPDES permit number of the treatment works that receives this discharge

Provide the average daily flow rate from the treatment works into the receiving facility. mgd

e. Does the treatment works discharge or dispose of its wastewater in a manner not included in A.8. through A.8.d above (e.g., underground percolation, well injection): ☐ Yes ☒ No

If yes, provide the following for each disposal method:

Description of method (including location and size of site(s) if applicable):

Annual daily volume disposed by this method:

Is disposal through this method ☐ continuous or ☐ intermittent?

## WASTEWATER DISCHARGES:

**If you answered "yes" to question A.8.a,** complete questions A.9 through A.12 **once for each outfall** (including bypass points) through which effluent is discharged. Do not include information on combined sewer overflows in this section. **If you answered "no" to question A.8.a,** go to Part B, "Additional Application Information for Applicants with a Design Flow Greater than or Equal to 0.1 mgd."

**A.9. Description of Outfall.**

a. Outfall number: 1

b. Location:
Baxter, TN (City or town, if applicable) — 38544 (Zip Code)
Putnam (County) — TN (State)
36.145556 (Lattitutde) — 85.644167 (Longitude)

c. Distance from shore (if applicable): _____ ft.

d. Depth below surface (if applicable): _____ ft.

e. Average daily flow rate: .186 mgd

f. Does this outfall have either an intermittent or a periodic discharge? ☐ Yes ☒ No (go to A.9.g.)
If yes, provide the following information:
Number f times per year discharge occurs: _____
Average duration of each discharge: _____
Average flow per discharge: _____ mgd
Months in which discharge occurs: _____

g. Is outfall equipped with a diffuser? ☐ Yes ☒ No

**A.10. Description of Receiving Waters.**

a. Name of receiving water: Mine Lick Creek

b. Name of watershed (if known): Caney Fork
United States Soil Conservation Service 14-digit watershed code (if known): _____

c. Name of State Management/River Basin (if known): _____
United States Geological Survey 8-digit hydrologic cataloging unit code (if known): _____

d. Critical low flow of receiving stream (if applicable)
acute _____ cfs chronic _____ cfs

e. Total hardness of receiving stream at critical low flow (if applicable): _____ mg/l of $CaCO_3$

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**A.11. Description of Treatment**

a. What levels of treatment are provided? Check all that apply.

☐ Primary ☒ Secondary

☐ Advanced ☐ Other. Describe: _____

b. Indicate the following removal rates (as applicable):

Design BOD5 removal or Design CBOD5 removal **98-99** %

Design SS removal **98-99** %

Design P removal **NA** %

Design N removal **NA** %

Other **Nitrogen, Ammonia Total (as N)** **98-99** %

c. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:

**chlorination**

If disinfection is by chlorination is dechlorination used for this outfall? ☒ Yes ☐ No

d. Does the treatment plant have post aeration? ☒ Yes ☐ No

**A.12 Effluent Testing Information. All Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide the indicated effluent testing required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum, effluent testing data must be based on at least three samples and must be no more than four and one-half years apart.**

Outfall number: **1**

| PARAMETER | MAXIMUM DAILY VALUE | | AVERAGE DAILY VALUE | | |
|---|---|---|---|---|---|
| | Value | Units | Value | Units | Number of Samples |
| pH (Minimum) | 6.2 | s.u. | | | |
| pH (Maximum) | 7.6 | s.u. | | | |
| Flow Rate | 1.14 | MGD | .186 | MGD | 365 |
| Temperature (Winter) | 14.5 | degrees celcius | 11.6 | degrees celcius | 64 |
| Temperature (Summer) | 27.5 | degrees celcius | 25.1 | degrees celcius | 66 |

* For pH please report a minimum and a maximum daily value

| POLLUTANT | | MAXIMUM DAILY DISCHARGE | | AVERAGE DAILY DISCHARGE | | | ANALYTICAL METHOD | ML/MDL |
|---|---|---|---|---|---|---|---|---|
| | | Conc. | Units | Conc. | Units | Number of Samples | | |
| **CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS** | | | | | | | | |
| BIOCHEMICAL OXYGEN DEMAND (Report one) | BOD5 | | | | | | | |
| | CBOD5 | 13 | mg/L | 1.2 | mg/L | 156 | 5210B | |
| ~~FECAL COLIFORM~~ TB E-coli | | 299 | #col/100 ml | 33 | #col/100ml | 156 | 9223B2004 | |
| TOTAL SUSPENDED SOLIDS (TSS) | | 20 | mg/L | 2.8 | mg/L | 156 | 2540D | |

**END OF PART A.**
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

## BASIC APPLICATION INFORMATION

### PART B. ADDITIONAL APPLICATION INFORMATION FOR APPLICANTS WITH A DESIGN FLOW GREATER THAN OR EQUAL TO 0.1 MGD (100,000 gallons per day).

**All applicants with a design flow rate ≥ 0.1 mgd must answer questions B.1 through B.6. All others go to Part C (Certification).**

B.1. Inflow and Infiltration. **Estimate the average number of gallons per day that flow into the treatment works from inflow and/or infiltration.**

72,540 gpd

Briefly explain any steps underway or planned to minimize inflow and infiltration.

**The City of Baxter has begun a comprehensive collection system rehabilitation program in conjunction with City Engineer Tom Bennett of Bennett Associates Consulting Engineers at P.O. Box 1293 Jamestown, TN 38556.**

**B.2. Topographic Map.** Attach to this application a topographic map of the area extending at least one mile beyond facility property boundaries. This map must show the outline of the facility and the following information. (You may submit more than one map if one map does not show the entire area.)

a. The area surrounding the treatment plant, including all unit processes.

b. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.

c. Each well where wastewater from the treatment plant is injected underground.

d. Wells, springs, other surface water bodies, and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.

e. Any areas where the sewage sludge produced by the treatment works is stored, treated, or disposed.

f. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act (RCRA) by truck, rail, or special pipe, show on the map where the hazardous waste enters the treatment works and where it is treated, stored, and/or disposed.

**B.3. Process Flow Diagram or Schematic.** Provide a diagram showing the processes of the treatment plant, including all bypass piping and all backup power sources or redundancy in the system. Also provide a water balance showing all treatment units, including disinfection (e.g., chlorination and dechlorination). The water balance must show daily average flow rates at influent and discharge points and approximate daily flow rates between treatment units. Include a brief narrative description of the diagram.

B.4. Operation/Maintenance Performed by Contractor(s).

Are any operational or maintenance aspects (related to wastewater treatment and effluent quality) of the treatment works the responsibility of a contractor? ☐ Yes ☒ No

If yes, list the name, address, telephone number, and status of each contractor and describe the contractor's responsibilities (attach additional pages if necessary).

Name: _____

Mailing Address: _____

_____

Telephone Number: (  ) _____

Responsibilities of Contractor: _____

**B.5. Scheduled improvements and Schedules of Implementation.** Provide information on any uncompleted implementation schedule or uncompleted plans for improvements that will affect the wastewater treatment, effluent quality, or design capacity of the treatment works. If the treatment works has several different implementation schedules or is planning several improvements, submit separate responses to question B.5 for each. (If none, go to question B.6.)

a. List the outfall number (assigned in question A.9) for each outfall that is covered by this implementation schedule.

_____

b. Indicate whether the planned improvements or implementation schedule are required by local, State, or Federal agencies.

☐ Yes ☐ No

c. If the answer to B.5.b is "Yes," briefly describe, including new maximum daily inflow rate (if applicable).

d. Provide dates imposed by any compliance schedule or any actual dates of completion for the implementation steps listed below, as applicable. For improvements planned independently of local, State, or Federal agencies, indicate planned or actual completion dates, as applicable. Indicate dates as accurately as possible.

| Implementation Stage | Schedule MM/DD/YYYY | Actual Completion MM/DD/YYYY |
|---|---|---|
| - Begin Construction | / / | / / |
| - End Construction | / / | / / |
| - Begin Discharge | / / | / / |
| - Attain Operational Level | / / | / / |

e. Have appropriate permits/clearances concerning other Federal/State requirements been obtained? ☐ Yes ☐ No

Describe briefly:

## B.6. EFFLUENT TESTING DATA (GREATER THAN 0.1 MGD ONLY).

Applicants that discharge to waters of the US must provide effluent testing data for the following parameters. Provide effluent testing for the following listed parameters and those required by the permitting authority for each outfall through which effluent is discharged. Do not include information on combined sewer overflows in this section. All information reported must be based on data collected through analysis conducted using 40 CFR Part 136 methods. In addition, this data must comply with QA/QC requirements of 40 CFR Part 136 and other appropriate QA/QC requirements for standard methods for analytes not addressed by 40 CFR Part 136. At a minimum effluent testing data must be based on at least three pollutant scans, preferably represent several seasons, and must be no more than four and on-half years old.

Outfall Number: 1

| POLLUTANT | MAXIMUM DAILY DISCHARGE | | AVERAGE DAILY DISCHARGE | | | ANALYTICAL METHOD | ML/MDL |
|---|---|---|---|---|---|---|---|
| | Conc. | Units | Conc. | Units | Number of Samples | | |
| **CONVENTIONAL AND NON CONVENTIONAL COMPOUNDS** | | | | | | | |
| AMMONIA (as N) | .47 | mg/L | .16 | mg/L | 156 | 4500-NH3D | |
| CHLORINE (TOTAL RESIDUAL, TRC) | .06 | mg/L | BDL of .05 mg/L | mg/L | 257 | 4500-CIG | |
| DISSOLVED OXYGEN | 11.5 | mg/L | 9.2 | mg/L | 257 | 4500-OG | |
| TOTAL KJELDAHL NITROGEN (TKN) | 15.5 | mg/L | 1.7 | mg/L | 20 | 351.2 | |
| NITRATE PLUS NITRITE NITROGEN | 13.5 | mg/L | 6.9 | mg/L | 20 | 353.2 | |
| OIL and GREASE | <1.4 | mg/L | <1.4 | mg/L | 3 | 1664A | |
| PHOSPHORUS (Total) | 4.95 | mg/L | 2.0 | mg/L | 20 | 365.1 | |
| TOTAL DISSOLVED SOLIDS (TDS) | 360 | mg/L | 301 | mg/L | 3 | 2540C | |
| OTHER | | | | | | | |

**END OF PART B.**
**REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM 2A YOU MUST COMPLETE**

FACILITY NAME AND PERMIT NUMBER:

**Baxter, TN WWTP TN0021121**

*Form Approved 1/14/99*
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## BASIC APPLICATION INFORMATION

### PART C. CERTIFICATION

All applicants must complete the Certification Section. Refer to instructions to determine who is an officer for the purposes of this certification. All applicants must complete all applicable sections of Form 2A, as explained in the Application Overview. Indicate below which parts of Form 2A you have completed and are submitting. By signing this certification statement, applicants confirm that they have reviewed Form 2A and have completed all sections that apply to the facility for which this application is submitted.

**Indicate which parts of Form 2A you have completed and are submitting:**

☒ Basic Application Information packet

Supplemental Application Information packet:

☐ Part D (Expanded Effluent Testing Data)

☐ Part E (Toxicity Testing: Biomonitoring Data)

☐ Part F (Industrial User Discharges and RCRA/CERCLA Wastes)

☐ Part G (Combined Sewer Systems)

### ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and official title: **John Martin, Mayor, City of Baxter**

Signature: John Martin

Telephone number: **(931) 858-4111**

Date signed: 1-19-17

Upon request of the permitting authority, you must submit any other information necessary to assure wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

## SEND COMPLETED FORMS TO:

Tennessee Department of Environment and Conservation
Division of Water Pollution Control
401 Church Street, 6th Floor L & C Annex
Nashville, TN 37243-1534
Phone:(615) 532-0625

# PERMIT CONTACT INFORMATION

**Please complete all sections. If one person serves multiple functions, please repeat this information in each section.**

**PERMIT NUMBER:** TN0021121 **DATE:** **January 13, 2017**

**PERMITTED FACILITY:** Baxter, TN WWTP **COUNTY:** **Putnam**

## OFFICIAL PERMIT CONTACT:

(The permit signatory authority, e.g. responsible corporate officer, principle executive officer or ranking elected official)

| | | | |
|---|---|---|---|
| **Official Contact:** **John Martin** | Title or Position: **Mayor** | | |
| **Mailing Address:** **P.O. Box 335** | City: Baxter | State: **TN** | Zip: **38544** |
| **Phone number(s):** **931-858-4111** | E-mail: **jbm13131313@yahoo.com** | | |

## PERMIT BILLING ADDRESS (where invoices should be sent):

| | | | |
|---|---|---|---|
| Billing Contact: **Melanie Harris** | Title or Position: **Water Office Manager** | | |
| Mailing Address: **P.O. Box 283** | City: Baxter | State: **TN** | Zip: **38544** |
| Phone number(s): **932-858-4142** | E-mail: **mhwaterclerk@twlakes.net** | | |

## FACILITY LOCATION (actual location of permit site and local contact for site activity):

| | | | |
|---|---|---|---|
| Facility Location Contact: **Tommy Buford** | Title or Position: **Chief WWTP Operator** | | |
| Facility Location (physical street address): **810 Elmore Town Road** | City: Baxter | State: **TN** | Zip: **38544** |
| Phone number(s): **931-858-3348** **931-265-1300** | E-mail: **tommybuford@charter.net** | | |
| Alternate Contact (if desired): | Title or Position: | | |
| Mailing Address: | City: | State: | Zip: |
| Phone number(s): | E-mail: | | |

## FACILITY REPORTING (Discharge Monitoring Report (DMR) or other reporting):

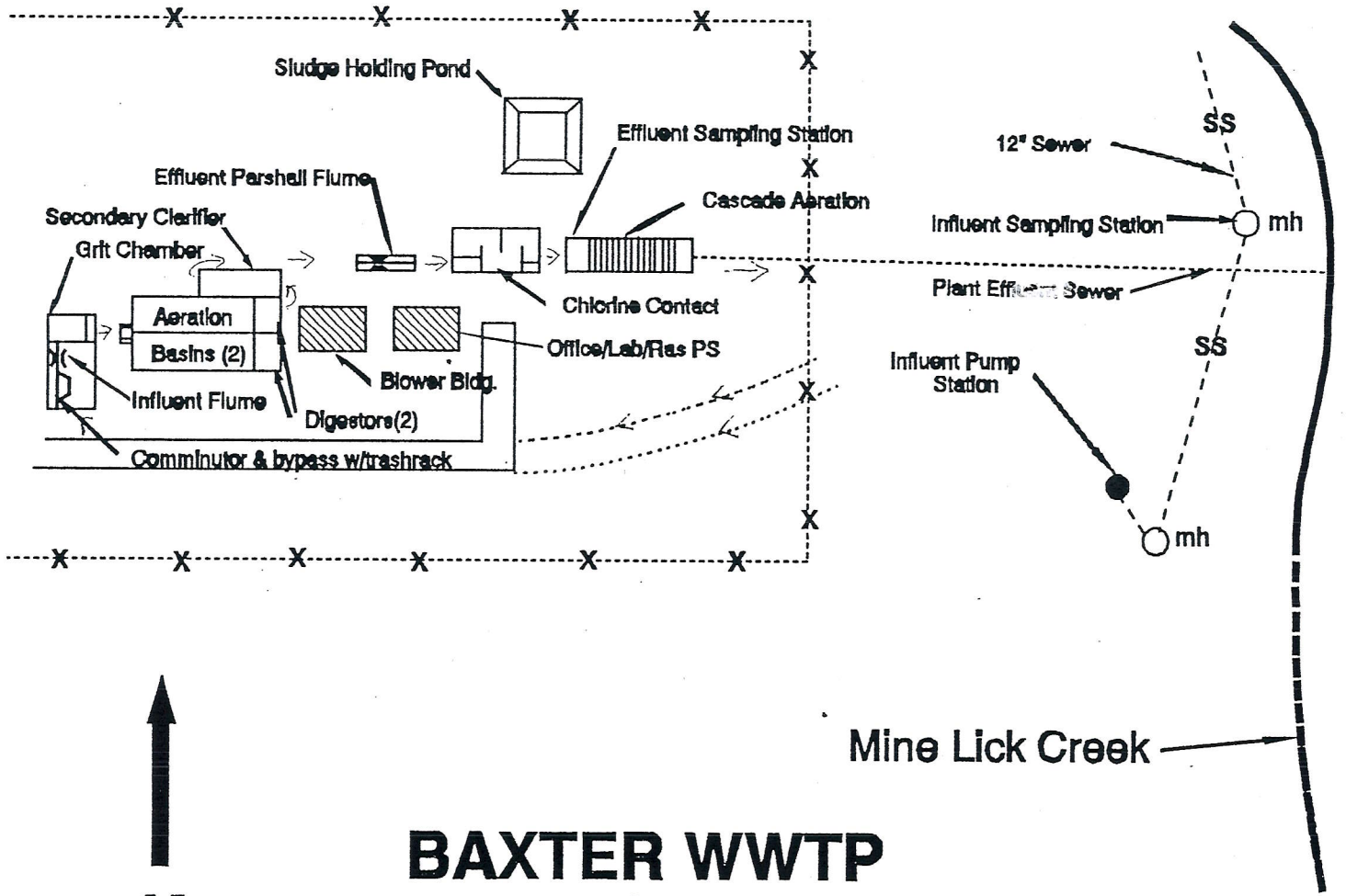
| | | | |
|---|---|---|---|
| Cognizant Official authorized for permit reporting: **Tommy Buford** | Title or Position: **Chief WWTP Operator** | | |
| Mailing Address: **P.O. Box 283** | City: Baxter | State: **TN** | Zip: **38544** |
| Phone number(s): **931-858-3348** **931-265-1300** | E-mail: **tommybuford@charter.net** | | |
| Fax number for reporting: **931-858-4112** | Does the facility have interest in starting electronic DMR reporting? Yes No | | |

**Baxter, TN WWTP TN0021121**

## NPDES FORM 3510-2A APPENDIX A

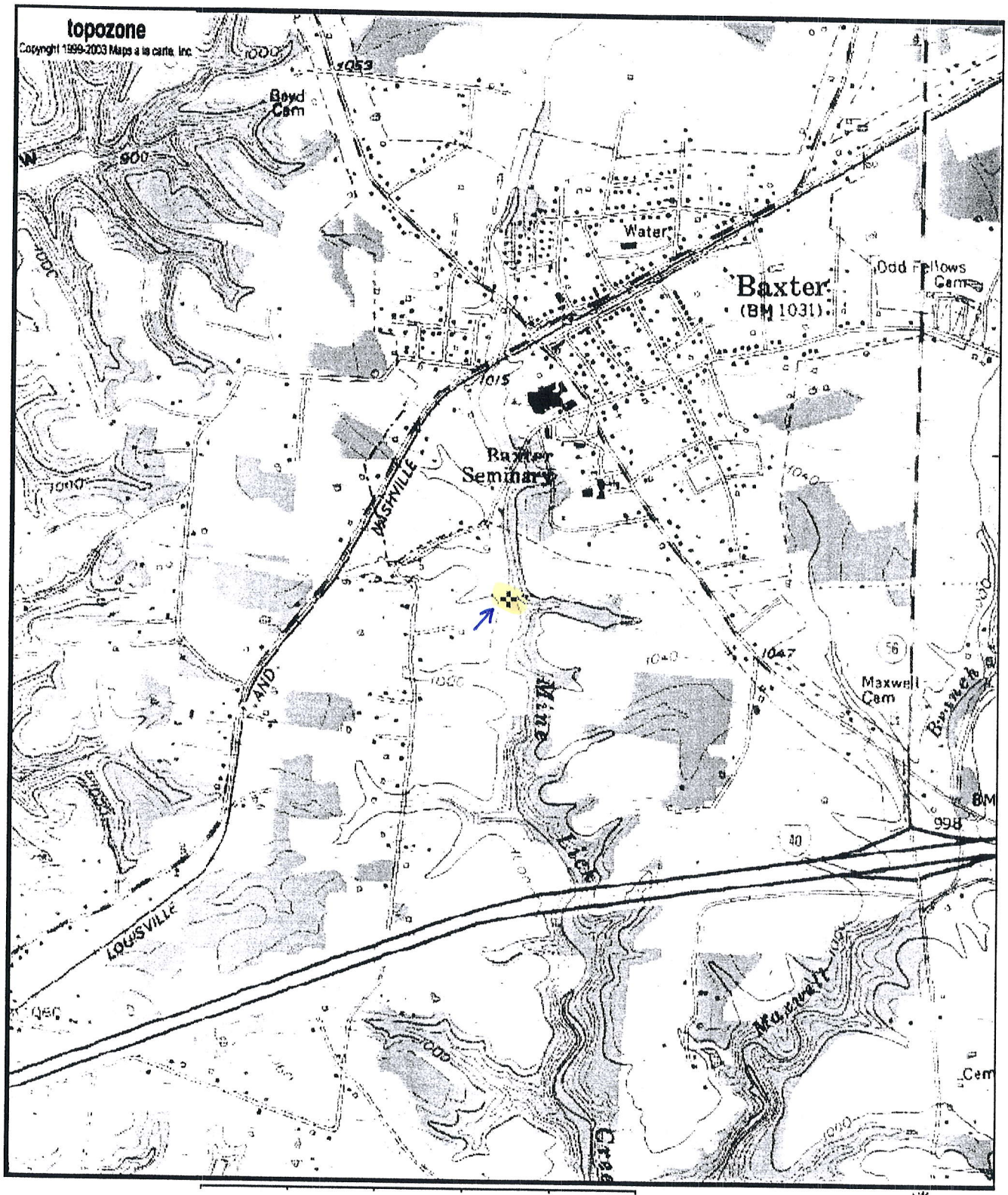
1. The City of Baxter respectfully requests that we be allowed to maintain our current nutrient limits and monitoring frequency in our new discharge permit. Baxter is meeting the current nutrient limits because the flow to the WWTP is below design capacity. Future growth in Baxter and the accompanying increase in flow will make it difficult for the City to meet the current nutrient limits. Any reduction in our current limits will force Baxter to modify the WWTP and that could potentially bankrupt this small community. Thank you for considering this request.

2. The City of Baxter respectfully requests a reduction in monitoring frequency from three times weekly to one time weekly for the following parameters: CBOD5, Total Suspended Solids, Settleable Solids, Nitrogen, Ammonia Total (as N), and E-coli. We have had no permit violations for the above mentioned parameters. This reduction in monitoring frequency would result in significant monetary and time savings that can be spent on other aspects of wastewater operations. Thank you for considering this request.




**BAXTER WWTP**
**n.t.s.**

**Figure 1**




0 0.3 0.6 0.9 1.2 1.5 km

0 0.2 0.4 0.6 0.8 1 mi

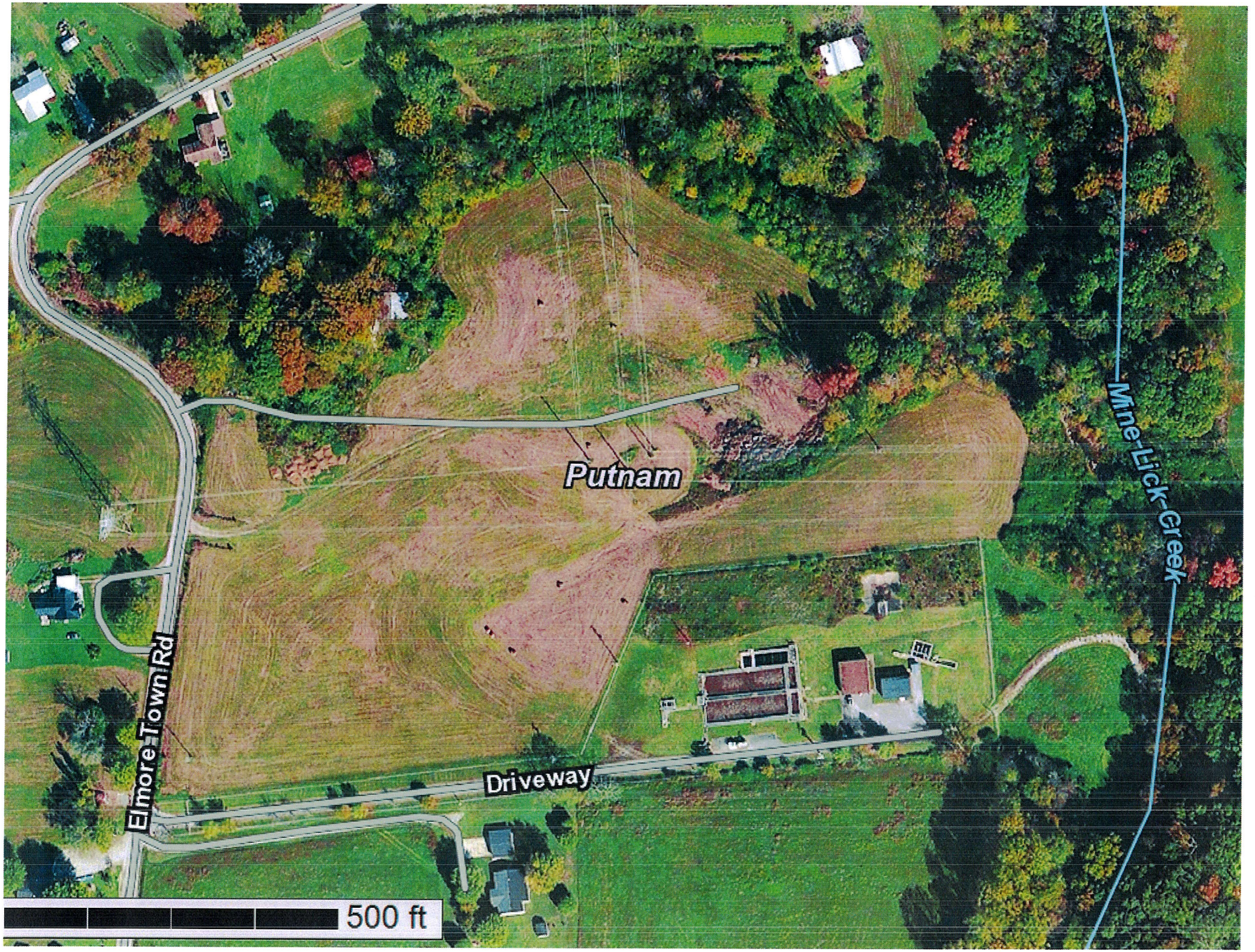
Map center is 36° 08' 44"N, 85° 38' 39"W (WGS84/NAD83)

**Baxter** quadrangle

Projection is UTM Zone 16 NAD83 Datum

M=-3.599

G=0.8


Putnam
Elmore Town Rd
Driveway
Mine Lick Creek
500 ft